<u>IN THE CLAIMS</u>

Please cancel claim 10, amend claims 1-9, and add new claims 11 and 12 as follows:

1. (Currently Amended)   ~~Loudspeaker~~ A loudspeaker protection system comprising:

        filter means for ~~defining one or more~~ dividing a frequency spectrum of an input audio signal into a plurality of frequency

5 bands ~~of an audio signal, characterised in that the loudspeaker~~ ~~protection system further comprises~~ ;

        controllable amplifier/attenuator means coupled to the filter means~~,~~ ; and

        processing means ~~coupled to control~~ for controlling the

10 amplifier/attenuator means, ~~such as to determine~~ said processing means determining audio power in ~~at least one of~~ said frequency bands representing relevant loudspeaker protection information, and selectively controlling said controllable amplifier/attenuator means in response to the determined ~~used for selective~~ audio power

15 ~~control~~ in ~~said~~ at least one of said plurality of frequency bands.

2. (Currently Amended)   ~~Loudspeaker~~ The loudspeaker protection system ~~according to~~ as claimed in claim 1, ~~characterised~~ characterized in that the processing means ~~are equipped to~~

~~determine~~determines the audio power S_j in frequency band j in

5 proportion to:

$$v_{jtop}^2 * R\{Y_j\},$$

where v_{jtop} is the peak value of the amplitude of the frequency

components in frequency band j, and $R\{Y_j\}$ is the real part of the

electric admittance of the loudspeaker in frequency band j.

3. (Currently Amended)   ~~Loudspeaker~~ The loudspeaker protection

system ~~according to~~as claimed in claim 2, ~~characterised~~

characterized in that in the loudspeaker protection system, j = 1,

2, 3 ... n, where n equals the number of frequency bands ~~wherein~~

5 into which the frequency spectrum of the audio signal is divided.

4. (Currently Amended)   ~~Loudspeaker protection system according~~

~~to claim 2~~A loudspeaker protection system comprising:

        filter means for defining one or more frequency bands of

an audio signal;

5   controllable amplifier/attenuator means coupled to the

filter means; and

        processing means coupled to control the

amplifier/attenuator means, such as to determine audio power in at

least one of said frequency bands representing relevant loudspeaker

10 protection information used for selective audio power control in

said at least one frequency band, ~~characterised~~

characterized in that the processing means <u>determines the audio</u>

<u>power</u> S_j <u>in frequency band j in proportion to:</u>

$$\underline{v_{jtop}^2 \ast R\{Y_j\},}$$

15 <u>where</u> v_{jtop} <u>is the peak value of the amplitude of the frequency</u>

<u>components in frequency band j, and</u> $R\{Y_j\}$ <u>is the real part of the</u>

<u>electric admittance of the loudspeaker in frequency band j, and the</u>

<u>processing means</u> ~~are capable of summing~~<u>sums the audio power</u> S_j <u>in</u>

<u>the plurality of frequency bands</u> over a specified sub<u>-</u>range of

20 possible values of j, where j ~~is in the range~~<u>ranges</u> from 1, 2, ...

n.

5.   (Currently Amended)   ~~Loudspeaker~~<u>The loudspeaker</u> protection

system ~~according to~~<u>as claimed in</u> claim 4, ~~characterised~~

<u>characterized</u> in that if any summed value or combination of values

S_j approximates ~~some normalised~~<u>a normalized</u> value S_{norm}~~-~~<u>, the</u>

5 <u>processing means then controls</u> the amplifier/attenuator means ~~are~~

~~controlled by the processing means~~.

6.   (Currently Amended)   ~~Loudspeaker~~<u>The loudspeaker</u> protection

system ~~according to~~<u>as claimed in</u> claim 4, ~~characterised~~

<u>characterized</u> in that the processing means ~~are equipped to~~

~~determine~~<u>determines</u> S_j or any summation thereof every 0.001 - 2

5 sec.~~, in particular every .1 - 1 sec.~~

7. (Currently Amended) ~~Loudspeaker~~ The loudspeaker protection system ~~according to~~as claimed in claim ~~1~~5, ~~characterised~~ characterized in that the processing means controls the amplifier/attenuator means ~~are controlled~~ such ~~by the processing means~~ that attenuation factors of the amplifier/attenuator means are proportional to:

$$1 / \sqrt{\alpha} + \beta_j (1 - 1 / \sqrt{\alpha})$$

where $\alpha = S/S_{norm}$, S is the summed value, and β_j represents a factor ~~whose~~ having a value ~~depends~~ depending empirically on the particular frequency band j.

8. (Currently Amended) ~~Loudspeaker~~ The loudspeaker protection system ~~according to~~as claimed in claim 1, ~~characterised~~ characterized in that output means of said amplifier/attenuator means is coupled to a first terminal of a loudspeaker, and the loudspeaker protection system further comprises ~~a series arrangement of the loudspeaker and~~ a measuring element coupling a second terminal of the loudspeaker to ground, ~~such as a resistance~~, ~~whose~~ a common connection point ~~is~~ between the loudspeaker and the measuring element being coupled to the processing means, whereby ~~to account for~~ actual impedance data of the loudspeaker as determined by the measuring element is taken into account by the processing means.

9.   (Currently Amended)   ~~Loudspeaker~~ The loudspeaker protection system ~~according to~~as claimed in claim 1, ~~characterised~~ characterized in that the processing means ~~is arranged to initiate~~initiates control of the amplifier/attenuator means in a shorter amount of time than ~~that~~the amount of time over which control is withdrawn.

5

10.   (Cancelled).

11.   (New)   The loudspeaker protection system as claimed in claim 6, characterized in that the processing means determines S_j or any summation thereof every 0.1 - 1 sec.

12.   (New)   The loudspeaker protection system as claimed in claim 8, wherein said measuring element is a resistor.